

106  
**sertifikaat**

ATENTKANTOOR

REPUBLIC OF SOUTH AFRICA

EPARTEMENT VAN HANDEL  
EN NYWERHEID

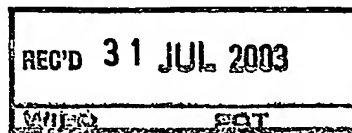
01 SEP 2004



10/06341  
**Certificate**  
PATENT OFFICE  
REPUBLIEK VAN SUID-AFRIKA

DEPARTMENT OF TRADE AND  
INDUSTRY

hiermee word gesertifiseer dat  
this is to certify that



The documents annexed hereto are true copies of:

Application forms P.1 and P.2, provisional specification and drawings of  
South African Patent Application No. 2002/1719 as originally filed in the  
Republic of South Africa on 01 March 2002 in the name of CILLIERS DE  
KOCK for an invention entitled: "A COOKING APPARATUS".

**PRIORITY DOCUMENT**  
SUBMITTED OR TRANSMITTED IN  
COMPLIANCE WITH  
RULE 17.1(a) OR (b)

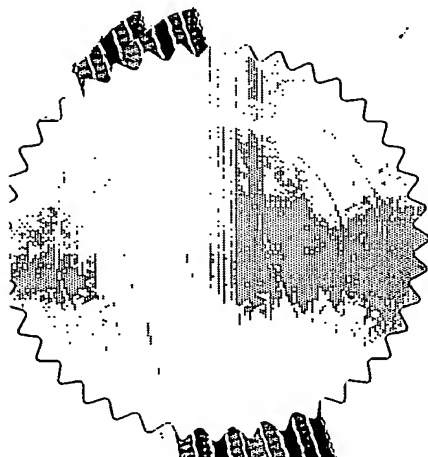
Geteken te  
Signed at

PRETORIA

in die Republiek van Suid-Afrika, hierdie  
in the Republic of South Africa, this

8th

dsg van  
day of July 2003

  
Registrateur van Patente

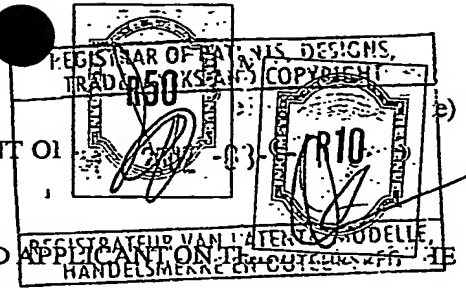
Best Available Copy

REPUBLIC OF SOUTH AFRICA		REGISTER OF PATENTS		PATENTS ACT, 1978	
OFFICIAL APPLICATION NO.		LODGING DATE: PROVISIONAL		ACCEPTANCE DATE	
22	1 2002 / 17 19	22	2002 -03- 01	47	
INTERNATIONAL CLASSIFICATION		LODGING DATE: COMPLETE		GRANTED DATE	
FULL NAME(S) OF APPLICANT(S) /PATENTEE(S)					
71	Cilliers, De Kock				
APPLICANTS SUBSTITUTED:				DATE REGISTERED	
71					
ASSIGNEE(S)				DATE REGISTERED	
71					
FULL NAME(S) OF INVENTOR(S)					
72	Cilliers De Kock				
PRIORITY CLAIMED		COUNTRY		NUMBER	
Use International Abbreviation		33	-----	31	-----
				32	-----
TITLE OF INVENTION					
54	A Cooking Apparatus				
ADDRESS OF APPLICANT(S) /PATENTEE(S)					
Private Bag x 21, S - 247, Sunnyside 0132			22 Reedbuck Crescent Corporate Park Midrand		
ADDRESS FOR SERVICE				REF:	
74	Private Bag x 21, S-247, Sunnyside, 0132			212173	
PATENT OF ADDITION TO NO.		DATE OF ANY CHANGE			
61					
FRESH APPLICATION BASED ON		DATE OF ANY CHANGE			

REPUBLIC OF SOUTH AFRICA

PATENTS ACT, 1978

APPLICATION FOR A PATENT AND ACKNOWLEDGEMENT OF  
(Section 30(1) Regulation 22)



THE GRANT OF A PATENT IS HEREBY REQUESTED BY THE UNDERMENTIONED APPLICANT ON THE PRESENT APPLICATION FILED IN DUPLICATE

21	01	PATENT APPLICATION NO: 2002/1719
----	----	----------------------------------

71	FULL NAME(S) OF APPLICANT(S)
----	------------------------------

Cilliers De Kock

ADDRESS(ES) OF APPLICANT(S)
-----------------------------

Private Bag x 21,  
S - 247, Sunnyside  
0132

22 Reedbuck Crescent  
Corporate Park  
Midrand

54	TITLE OF INVENTION
----	--------------------

A Cooking Apparatus

☐ THE APPLICANT CLAIMS PRIORITY AS SET OUT ON THE ACCOMPANYING FORM P.2. The earliest priority claimed is

Country:

No:

Date:

☐ THE APPLICATION IS FOR A PATENT OF ADDITION TO PATENT APPLICATION NO 21 01

☐ THIS APPLICATION IS A FRESH APPLICATION IN TERMS OF SECTION 37 AND BASED ON APPLICATION NO 21 01

THIS APPLICATION IS ACCOMPANIED BY:

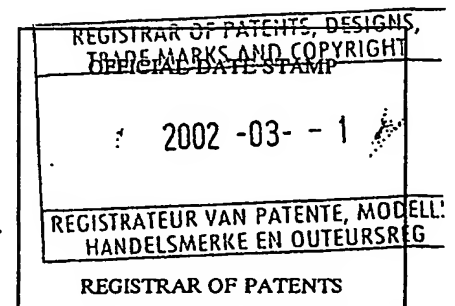
- ☒ A single copy of a provisional specification of 14 pages
- ☒ Drawings of 8 sheets
- ☐ Publication particulars and abstract (Form P.8 in duplicate)
- ☐ A copy of Figure of the drawings (if any) for the abstract
- ☐ An assignment of invention
- ☐ Certified priority document(s).
- ☐ Translation of the priority document(s)
- ☐ An assignment of priority rights
- ☐ A copy of Form P.2 and the specification of RSA Patent Application No 21 01
- ☒ Form P.2 in duplicate
- ☒ A declaration and power of attorney on Form P.3
- ☐ Request for classification on Form P.9
- ☐ Request for delay of acceptance on Form P.4

74	ADDRESS FOR SERVICE: Private Bag x 21, S - 247, Sunnyside, 0132
----	---

Dated this 28th day of February 2002

Signature of applicant

The duplicate will be returned to the applicant's address for service as proof of lodging but is not valid unless endorsed with official stamp



REPUBLIC OF SOUTH AFRICA  
Patents Act, 1978PROVISIONAL SPECIFICATION  
(Section 30 (1) - Regulation 28)

21	01	OFFICIAL APPLICATION NO
----	----	-------------------------

2002 / 17 19

22	LODGING DATE
----	--------------

2002 -03- 01

51	INTERNATIONAL CLASSIFICATION
----	------------------------------

71	FULL NAME(S) OF APPLICANT(S)
----	------------------------------

Cilliers De Kock

72	FULL NAME(S) OF INVENTOR(S)
----	-----------------------------

Cilliers De Kock

54	TITLE OF INVENTION
----	--------------------

A Cooking Apparatus


## FIELD OF THE INVENTION

The present invention relates to an apparatus for cooking and dispensing food products and is more particularly concerned with the frying of foods while having a tubular member assembly and improved heat control system to assure proper functioning. The apparatus may be used to prepare fast food products such as fried potato chips, etc.

## BACKGROUND TO THE INVENTION

Various types of devices have been proposed for preparing hot food products such as fried fish, fried potato chips, etc. Known devices have a number of drawbacks which preclude their general use. Some devices, for example, are adapted to provide food product continuously in regular succession; this is not practical in cases where demand is irregularly or when continuous conveyor type production is not desired. In others cases the known devices may be too expensive to operate or too expensive to manufacture. The time taken in order to cook a food product with known devices may also be too long to be of practical value for machines at fast food outlets.

In addition, known systems have drawbacks where the apparatuses are not properly sealed resulting in heat loss and ineffective operational conditions. In certain devices food products can at the same time contact a moving part and a non-moving part to become trapped or pinched between the two parts and as a result, the food products can be crushed thereby. Such mashing of the food product can lead to clogging of the moveable parts. In addition, mashed products as well as the undesirable introduction of food particles into the heating liquid may occur. Any of these consequences can impede the operation of the device and accelerate the need to clean the apparatus and/or to clean or replace the heating liquid. Either of these results can add undesirably to the maintenance/operating cost of the device.



Therefore, it would be advantageous to have a means for providing a fried food product on an intermittent basis with a minimum of attention while being under safe frying conditions.

It would also be advantageous to have a means for the quality production of food products under heating conditions suitable for proper functioning of the apparatus.


It would additionally be advantageous to have a means facilitating the frying process whereby food may submerge in and surface from the heated liquid through a rotational movement of the cooking tubular member containing the food so as to facilitate discharge of fried food products by gravity from the food pocket.

It would as well be advantageous to have a simple tubular and receptacle member assembly which can be used or installed in a cooking apparatus or frying arrangement as well as in any other type of food preparation and dispensing apparatus.

The object therefore of the present invention is to provide a cooking apparatus overcoming the above deficiencies, while incorporating an improved heat control and circulation system within a sealed environment.

## SUMMARY OF THE INVENTION

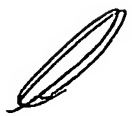
The present invention generally relates to a tubular member for an apparatus for cooking or preparing a food product. The tubular member is provided with at least one receptacle member or tube extending there through and having perforated walls at the lower tube section, which is rotatable about a horizontal axis, i.e. the tube and tubular member can rotationally tilt in an up and down fashion. The receptacle member may also rotate in a plane perpendicular to the rotational tilt of the tubular member. In accordance with the present invention, a food product is placed in the receptacle member, i.e. the body of the tube defining a food pocket integrally and as such, does not include elements which move relative to one another during rotation. Thus, during a rotational movement, the entire tubular member including all of the receptacle members, i.e. tube with food pocket may rotate as a unit.



Accordingly, as can be appreciated, this means that the food product is not susceptible to being pinched between moving elements and therefore the creation of mashed food products can be avoided. In accordance with the present invention, the words "integral", "integral unit" or the like, unless indicated to the contrary, shall thus be understood as characterizing the expression "receptacle member" or any similar or analogous expression as being a body which does not include elements which move relative to one another during rotation.

Thus, the present invention generally provides, a tubular member comprising an assembly for an apparatus for cooking food product in a heating liquid, said assembly comprising at least one tubular member, at least one receptacle member, cover means for covering an open end of said receptacle member, at least one lever to rotate the said assembly and means for rotatably mounting said assembly to a housing such that said tubular member is rotatable, with respect to said housing about a horizontal axis.

Preferably, the receptacle member comprises a tube with cylindrical body with walls embodying a plurality of perforations at a lower portion thereof. Said lower portion of the cylindrical body defines an integral food pocket for releasably holding the food products. Therefore, the food pocket holds food products during immersion of the food product in a heating liquid. Each tube with food pocket is an integral unit and may function independently from other tubes. The receptacle members or tubes are disposed radially about the horizontal axis of the tubular member and are each provided with an upper opening for the introduction of food products to the interior thereof into the food pocket, and for the removal of food products therefrom. When in operation, the upper opening of the receptacle member is closed by a cover means accordingly whereby a sealed unit is established for heat flow control, spillage is prevented and safety conditions are enhanced. The cover means need to be removed for the introduction of food products to the interior of a receptacle member and for the removal of food products therefrom. Preferably, the circumferential dimensions of the receptacle member at its open upper end may correspond with the circumferential dimensions of a container so that when the container is releasably positioned and snugly fitted over the open end of the said receptacle member, fried food products may be discharged from the food pocket into the container for serving purposes.



It should be appreciated that the cooking apparatus may function without the aforesaid containers where foods products may be discharged from the food pocket into a receiving surface below the receptacle members, when larger volumes of food products need to be accommodated.

In accordance with the present invention the side walls of the tubular member and/or the receptacle member may have circular cross-sections.

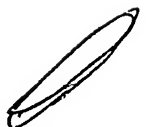
In accordance with the present invention, the receptacle members preferably are of equal size.

In accordance with the present invention the means for rotatably and removably mounting said tubular member may take any aspect which allows for rotation of the tubular member about its horizontal axis, for example, a spindle shaft.

In accordance with the present invention the tubular member may further include locking means to prevent unauthorized use and a counter device for measuring the amount of portions fried or cooked in co-ordination of the number of tilting movements of the said tubular member.

An apparatus incorporating the tubular member of the present invention may include a displacement or tilting movement for immersing and withdrawing the receptacle member from a cavity or tank containing a heating liquid (e.g. water, oil, fat or the like). The displacement mechanism may, for example, have a pivot arm, the pivot arm being fixed to the tubular member. In addition, the said tubular member may include at least one handle for convenience when the tubular member is detachably removed from the housing for cleaning purposes.

Further in accordance with the present invention, the apparatus may include at least one heater means in the form of a helical coil positioned in a tank containing a heating liquid. The tank may be positioned at such a location in the housing that the lower portion of the receptacle member with perforations may be immersed in the heating liquid when the tubular member is rotated. It should be appreciated that the heating means may also be positioned in close proximity to the tank containing the heating liquid.





An apparatus incorporating the tubular member of the present invention may, if desired, include means for automatically coordinating the activity(ies) of each of the member elements thereof. Automatic control means may comprise suitable conventional mechanisms for activating and controlling the various member elements; such means are known in the art and will thus not be particularly described herein. Control means may, for example, comprise any suitable timer control mechanisms for controlling, in a timed, cooking cycle sequence, the amount of food product to be inserted in a receptacle member, the cooking time (i.e. the time food product is immersed in cooking liquid), the start and duration of food product discharge, the start and duration of immersion time, the activation/deactivation of the tubular member inducing rotation of the tubular member. It should be noted that switches, buttons and timers activating the automatic control means should be preferably, situated at locations on the front panel of the housing to the side thereof for easy access and to enhance safety conditions.

As said above and in accordance with the present invention, for example, the rotation means for rotating the tubular member or the timing to do so manually, may be controlled by any suitable coordinating control mechanism such that in the immersion position, fresh food products are introduced into the receptacle member at the desired cooking temperature. In this position, the tubular member is in a upwardly tilted position. After the frying process is completed as controlled by any suitable coordinating control mechanism, the tubular member may be tilted downwardly to a discharging position for discharge of the fried food products. The tubular member rotation, may, however, if desired be controlled to an intermediate position, i.e. between the immersion and discharge positions to allow cooking fluids to drain away before discharge of the cooked food products.

It should be appreciated and if desired, that means may be provided for the tubular member to vibrate in order to shake off free cooking liquid from food products and/or the receptacle member after the frying process has been completed.

A device in accordance with the present invention, if desired, may be incorporated into a vending machine wherein the initial food product is in a frozen form (e.g. frozen potato chips), the hot product being dispensed to a customer in a relatively short period of time. Obviously, discharging or rotation of the tubular member can only occur in this particular case, on payment of the necessary remuneration.



The various parts of the tubular member and apparatus incorporating it, may be made of any material suitable for use in cooking a food product, (e.g. stainless steel or the like); it should be kept in mind, however, that the physical characteristics of the various elements must be such as to allow the elements to adequately function in a cooking environment.

In addition and according to the invention, the heating liquid may be stored in a separate container for refilling the tank located in the chamber. The refilling may be achieved by positioning the liquid container higher than the tank, i.e. on top of the housing, accordingly whereby the liquid container may be in flow communication with the chamber or tank so that heating liquid, under gravitational force may flow from the container to the tank when desired. Obviously, conventional mechanisms and devices, i.e. taps etc. may be provided to control the liquid flow as determined by a set minimum liquid level in the tank.

## DESCRIPTION OF THE DRAWINGS

An example embodiment of the invention is illustrated in the drawings wherein:

FIG. 1 is a three dimensional view of the present invention;

FIG. 2 is side view of FIG. 1 depicting the cooking apparatus, partially cut away to show the interior;

FIG. 3 is a rear view of FIG. 1, according to the invention;

FIG. 4 is a side view of FIG. 1 according to the invention;

FIG. 5 is a front view of FIG. 1;

FIG. 6 is a three dimensional view of the present invention partially cut away to show the interior;

FIG. 7 is a rear view of FIG. 1, viewed with the back wall partially cut away.

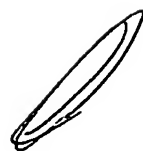


FIG. 8 is a three dimensional view of the tubular member with receptacle member.

## DESCRIPTION OF A PREFERRED EMBODIMENT

A particular example embodiment of the invention will hereinafter be described in more detail with reference to the figures.

FIG. 1 to 8 illustrate the present invention generally, and is showing a cooking apparatus 1 with tubular member 2 for an apparatus for cooking or preparing a food product. The tubular member 2 is provided with at least one receptacle member or tube 3 extending there through and having perforated walls 4 at the lower tube section, which is rotatable about a horizontal axis 5, i.e. the tube 3 and tubular member 2 can rotationally tilt in an up and down fashion. The receptacle member 3 may also rotate (in the direction of arrow C) in a plane perpendicular to the rotational tilt indicated by 9 of the tubular member 2. In accordance with the present invention, a food product (not shown) is placed in the receptacle member 3, i.e. the body of the tube defining a food pocket 8 integrally and as such, does not include elements which move relative to one another during rotation. Thus, during a rotational movement 9, the entire tubular member 2 including at least one of the receptacle members 3, i.e. tube 3 with food pocket 8 may rotate as a unit. Rotation C of the receptacle member 3 may assist in the cooking process to turn food products, if desired.

Thus, the present invention generally provides, a tubular member 2 comprising at least one receptacle member 3, cover means (not shown) for covering an open end 20 of said receptacle member 3, at least one pivot arm 11 to rotate the said tubular member 2 and means for rotatably mounting said tubular member 2 to a housing 12 such that said tubular member 2 is rotatable, with respect to said housing 12 about a horizontal axis 5.

Preferably, the receptacle member 3 comprises a cylindrical body with walls embodying a plurality of perforations 4 at a lower portion of the cylindrical body. Said lower portion of the cylindrical body defines an integral food pocket 8 for releasably holding the food products. Therefore, the food pocket 8 holds food products during immersion of the food product in a heating liquid 10. Each tube 3



with food pocket 8 is an integral unit and may function independently from a plurality of tubes 3.1, 3.2, 3.3 and 3.4. The receptacle members or tubes 3 (individually marked 3.1, 3.2, 3.3 and 3.4.), are disposed radially about the horizontal axis 5 of the tubular member 2 and are each provided with an upper opening 20 for the introduction of food products (not shown) to the interior thereof into the food pocket 8, and for the removal of food products therefrom. When in operation, the upper opening 20 of the receptacle member 3 is closed by a cover means (not shown) accordingly whereby a sealed unit is established for heat flow control, spillage is prevented and safety conditions are enhanced. The cover means need to be removed for the introduction of food products to the interior of a receptacle member 3 and for the removal of food products therefrom. Preferably, the circumferential dimensions of the receptacle member 3 at its open upper end may correspond with the circumferential dimensions of a container (not shown) so that when the container is releasably positioned snugly over the open end 20 of the said receptacle member 3, fried food products may be discharged from the food pocket 8 in the receptacle member 3 into the container (not shown) for serving purposes.

In accordance with the present invention the means for rotatably and removably mounting said tubular member 2 may take any aspect which allows for rotation of the tubular member 2 about its horizontal axis 5, for example, a spindle shaft (not shown). The position of the tubular member 2 with reference to the housing 12 is such that a larger part of the volume of the tubular member 12 be located within the chamber 22 defined by walls of the housing 12. The advantage being that the tubular member 3 in cooperation with a hinged front cover 23, may form a sealed closure of chamber 22 accordingly whereby vaporized gasses may condensate on the outer body of the tubular member 2 facing back wall 25 of housing 12, so that liquids gathered on the said tubular member 2 may drip into chamber 22 and consequently into tank 14. In this way, no vapor or odor may escape the chamber 22.


An apparatus 1 incorporating the tubular member 2 of the present invention may include a displacement or tilting movement 9 for immersing and withdrawing the receptacle member 3 from a cavity or tank 14 containing a heating liquid 10 (e.g. water, oil, fat or the like). The displacement mechanism may, for example, have a pivot arm 11, the pivot arm 11 being fixed to the tubular member 2. In addition, the said tubular member 2 may include at least one handle 15 for convenience when the

Since the tubular member 2 is abutting the inner sides of housing 12 to cause a sealed closure of chamber 22 at its front, the hinged front cover 23 needs to be released prior to the removal of tubular member 2 when cleaning is necessary.

Further in accordance with the present invention, the apparatus 1 may include at least one heater means 16 in the form of a helical coil positioned in a tank 14 containing a heating liquid 10. The tank 14 may be positioned at such a location in the housing 12 that the lower portion of the receptacle member 3 with perforations 4 may be immersed in the heating liquid 10 when the tubular member 2 is rotated. It should be appreciated that the heating means 16 may also be positioned in close proximity to the tank 14 containing the heating liquid 10.

In its present form, the tank 14 is positioned directly below chamber 22 such that when the receptacle member 3 is immersed in the heating liquid 10, the heating liquid 10 level may rise due to the food products and receptacle member 3 displacing the heating liquid 10. When this occurs, heating liquid 10 overflows the tank 14 through a filter 101 which is preferably positioned at the periphery of tank 14. The advantage being that particles floating on the surface of the heating fluid 10 is urged towards the filter due to the drawing force caused by the direction of overflow. The displacing and overflow of heating liquid 10 may further be enhanced by the positioning of a flat, relatively thin, rigid body of uniform thickness (not shown) at the underside 50 of the perforated walls 4 of the receptacle member 3.

According to the apparatus 1, the heating means 16 may be covered with a suitable material cover 102 to prevent clogging of food product particles on the surface of the heating means 16. The covering material may have a plurality of holes on either sides thereof to enhance heat transfer to the liquid 10. Preferably below the heating means 16 there is provided a cavity 60 so that a zone 103 within the heating liquid 10 may be created significantly lower in temperature compared to the heating liquid 10 above the heating means 16. As a result the aforesaid food product particles may be prevented from oxidizing and accordingly the time period between replacing heating liquid 10 is delayed. In addition, an outlet 45 may be provided at the lowest point of the tank 14 to drain heating liquid, when necessary.




In a further embodiment of the invention, an improved heat flow 13 may be provided for, wherein the rate of air circulation is increased. This is achieved by a motorized fan 30, in continuous operation, said fan 30 may be positioned in the housing 12, preferably in the vicinity of the tank 14, accordingly whereby ascending vapor escaping from the surface of the heating liquid 10 may be blown to cause a heat flow 13 towards tapered roof 31 of chamber 22. Since chamber 22 is sealed, the vapor may escape into outlet extraction pipes 33 and into a condenser system 34, located at the outside of back wall 25. As the vapor cools off in the condenser system 34, a liquid may be formed within the said condenser system 34 to be gathered within a reservoir 36 positioned at the lower end of the condenser system 34. The advantage being that the liquid formed through condensation may seal the contacting surfaces between the adjacent condenser system 34 and the reservoir 36. In short therefore, vapor flows through condenser system 34 in the direction of heat flow 13 to exit from the condenser system 34 into chamber 22 via inlet pipe 40, which is in flow communication between condenser system 34 and chamber 22. An outlet 41 is provided to drain any excess liquid gathered in reservoir 36.

Although the receptacle members are shown in the drawings as having a more or less circular shape volume, the receptacle members 3 may take on other aspects which may for example provide wedge volumes, square volumes, etc. Additionally the receptacle members need not share a common tubular member 2 and may function jointly or individually. The perforations are sized so as to allow the cooking liquid to pass into the interior of the receptacle members while yet being small enough to hold the food product therein.

By way of example, the total wattage of the heating element may be 7 500 watts. The preheat time for such an arrangement can be 10 minutes with a temperature for peak operation ranging between 170 degrees celcius and 185 degree celcius.

Thus, the apparatus in accordance with the present invention, can provide food products with a relatively reduced energy consumption; exploit a lower watt density so as to reduce oil scorching (i.e. oil can be used longer); provide a relatively easy to clean housing and tank (i.e. reduce or eliminate hard to clean squared corners and area); etc.




The operation of an apparatus in accordance with the present invention will now be described by way of example, in relation to the apparatus shown in the figures. The food product may, for example, be frozen french fries and the cooking liquid an oil suitable for cooking french fries.

As mentioned above at the commencement of the cooking cycle the receptacle member is in the immersion position, the cooking liquid being at a sufficient temperature to cook the food product, and the receptacle members are empty. Receptacle members or tubes may be considered as the only access to the cooking liquid for frying food products. The perforated lower section of the tubes allow the cooking liquid to enter the tube for frying purposes and to drain away excess liquid when the tube is rotated out of the cooking liquid. The tubes may be fitted to the tubular member or drum to allow rotational movement, i.e. in and out of the cooking liquid). Preferably, the tube is allowed to immerse into and remain in the cooking liquid, i.e. frying position, to minimize temperature loss. Covering means is provided for the open end of the tube to ensure a sealed receptacle or tube unit.

A zone, lower in temperature, i.e. cold zone is provided to prevent soaked particles of food products or dust and the like, to oxidize in the hot cooking liquid. As a result, this may extend the time period before the cooking liquid needs to be replaced. Preferably, the cold zone has a tapered lower section or bottom to allow convenient drainage. The source of heat energy or heating element may be covered to prevent dust particles and the like from sticking to element. Preferably, the heat element is closely bent for effective heat distribution and may be electronically controlled by a sensitive temperature controller to prevent overheating. As a result, this may extend the time period before the cooking liquid needs to be replaced. The heating means may have a safety thermostat connected thereto to prevent overheating.

The condenser system is an enclosed unit circulating air through, i.e. condensing water vapor. A driven centrifugal air pump blows air into the frying chamber and forces the hot air into the outlet pipes and then into the condenser tank. The oily/smelly air passes through the condenser filter system before it goes through the centrifugal pump again. Therefore the necessity of a canopy extractor system is alleviated.

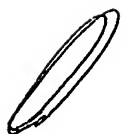


Preferably the tubular member is manually rotated to limit expenses while also lowering the risk of breakage and inoperative times. As a result less wear and tear on movable parts. In addition, the tubular members fit into the housing and operate under a gravitational force.

The chamber functions as a sealed unit. The heating liquid is not visible from the outside and also not easily accessible and thus enhancing safety features.

### **PREFERRED OPERATING PROCEDURES**

- Ensure that the cooking apparatus is clean and filled with heating liquid to its maximum level (As indicated on the back panel on the inside of the apparatus.)
- Empty the condenser system positioned at the back of the apparatus by opening the condenser tank drain valve. This must be done frequently to prevent the tank to overflow. This condenser tank drain valve can not be left open into a bucket, as it will effect the functionality of the air filter system.
- Switch the main on/off switch on which is located on the lower left hand side of the apparatus when standing in front of the apparatus – a red light will come on in the switch when switched on.
- The digital display / temperature controller located below the main switch will display the actual temperature of the heating liquid as it heats up to the preset temperature.
- The timers controlling the frying period are located above the main switch on both sides. It must be pre-set to the desired frying time indicated with a dial type timer.
- When the heating liquid reaches the pre-set temperature, the food product can be placed into the nominated tube which will automatically be in the frying position. The tube may be rotated to ensure proper distribution of the food product within the food pocket.
- Directly after the product has been put into the tube it slides down into the food pocket containing the heating liquid, the timer cycle button must be pressed to activate the timers. They are located above the timers on both sides. Each one represents the two tubes next to it.






- The polystyrene container or tub that was used to pre-portion the products that are being fried must be placed over the used tube to ensure the unit is enclosed.
- If the frying cycle has been completed a bleeper will sound and the green pilot light above the timer cycle button will come on to indicate which side is ready for serving.
- Reset the cycle and cancel the alarm by pushing the timer cycle button.
- Pull down the drum lever to the middle with the drums being in a horizontal position and hold it there for approx. 10 seconds. The product will now have time to drain from any heating liquid.
- Hold onto the polystyrene tub/container and lower the drum lever to the bottom. The product will now slide back into the tub/container which can be removed if full. The drum lever can now be pushed up to the frying position.
- The product can now be served and the apparatus is ready for the next cycle.

#### **PREFERRED SEQUENCE OF OPERATING STEPS**

- 1.) Check heating liquid level.(Full)
- 2.) Main switch on.
- 3.) Check timers.
- 4.) Check liquid temperature until preset temperature is reached.
- 5.) Insert food product for frying.
- 6.) Cover tube with tub/container.
- 7.) Activate cycle timer.
- 8.) Bleeper – switch cycle off.
- 9.) Move drum/tubular member to drain position for 10-seconds.
- 10.) Move drum/tubular member to serving position into tub/container.
- 11.) Lower drum/tubular member to frying position.

#### **Switch off.**

- 1.) Ensure apparatus is empty of product.
  - 2.) Main switch off.
  - 3.) Close tubes with tubs for standing overnight.
- 


The invention has been described with particular reference to an example embodiment; however, it is to be understood that the embodiments of the invention may take other forms without departing from the scope and spirit of the invention.

It will be appreciated that although various aspects of the invention have been described with respect to specific embodiments, alternatives and modifications will be apparent from the present disclosure, which are within the spirit and scope of the present invention.

Therefore, although the present invention has been described and illustrated as described with reference to the accompanying drawings, it is to be clearly understood that the same is by way of illustration and example only, and is not taken by way of limitation. The spirit and scope of the present invention are to be limited only by the terms of claims to be filed with the complete patent specification.

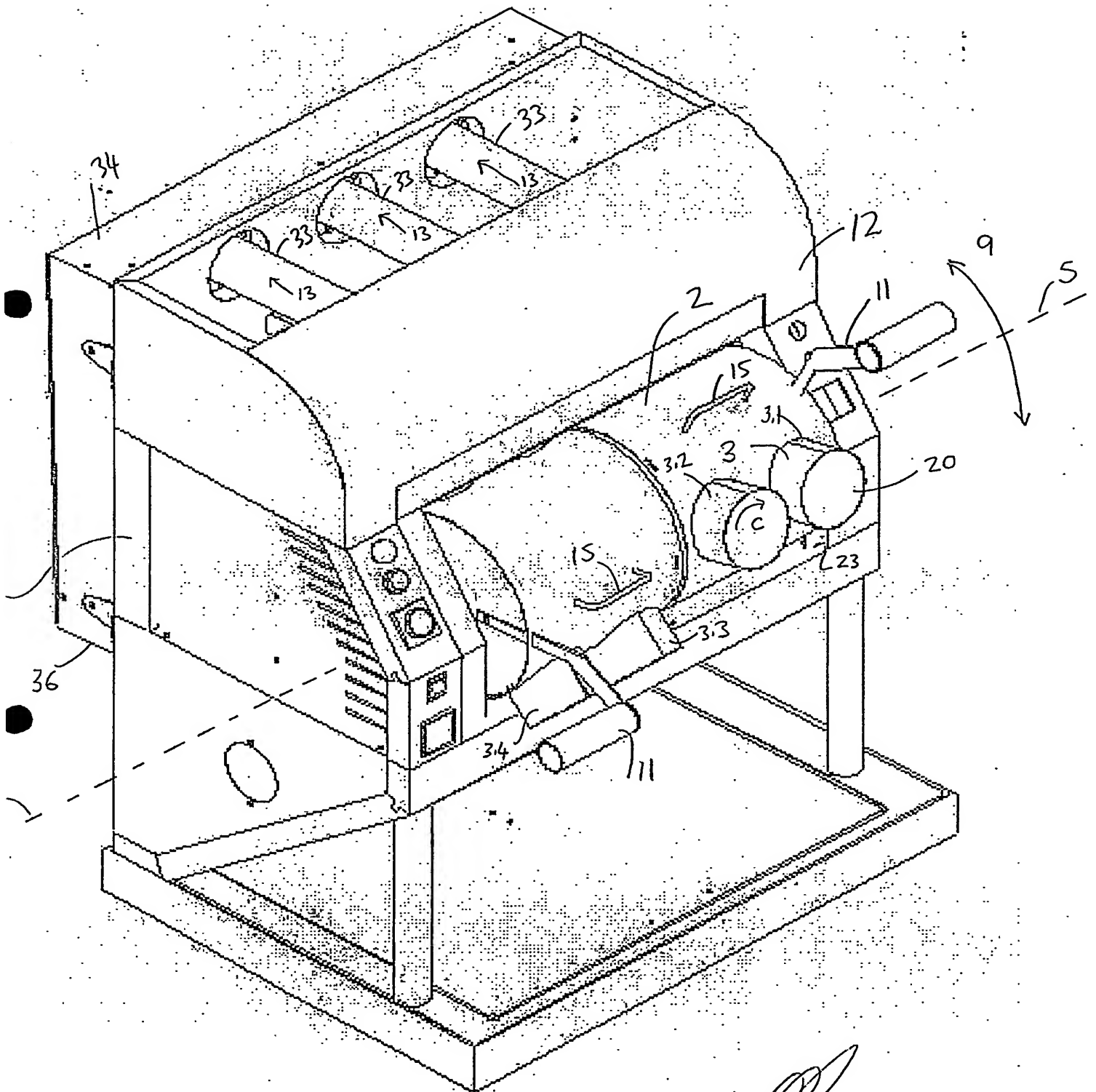
Thus, there is provided a cooking apparatus that comprises a helpful invention and although the described invention is both cheaper and simpler to manufacture it also offers performance advantages compared to conventional similar systems and devices.

SIGNED at... Pretoria ..... on this... 28th ..... day of... February ..... 2002.



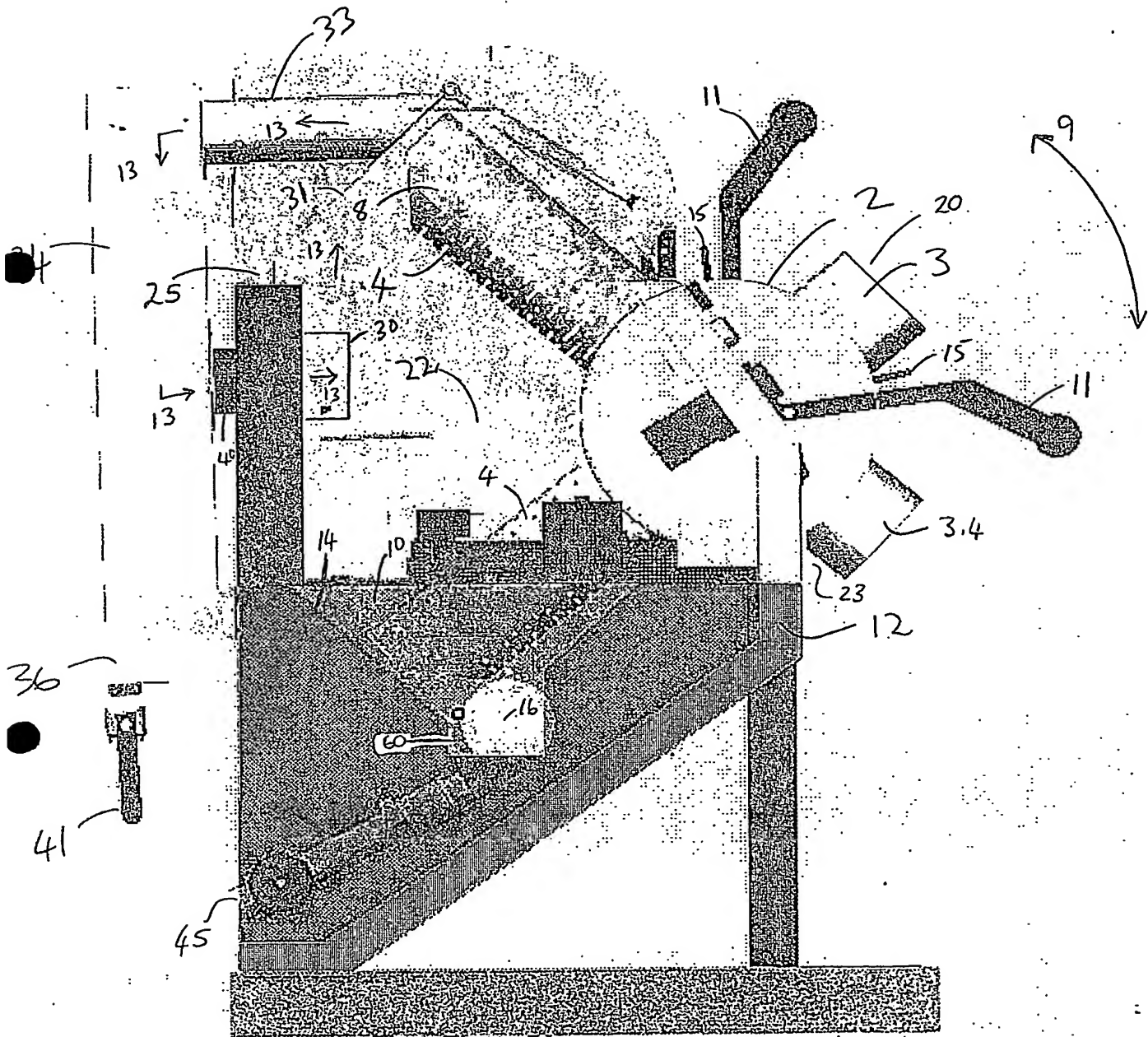
.....  
As applicant and inventor

Cilliers De Kock



Applicant

Figure 1




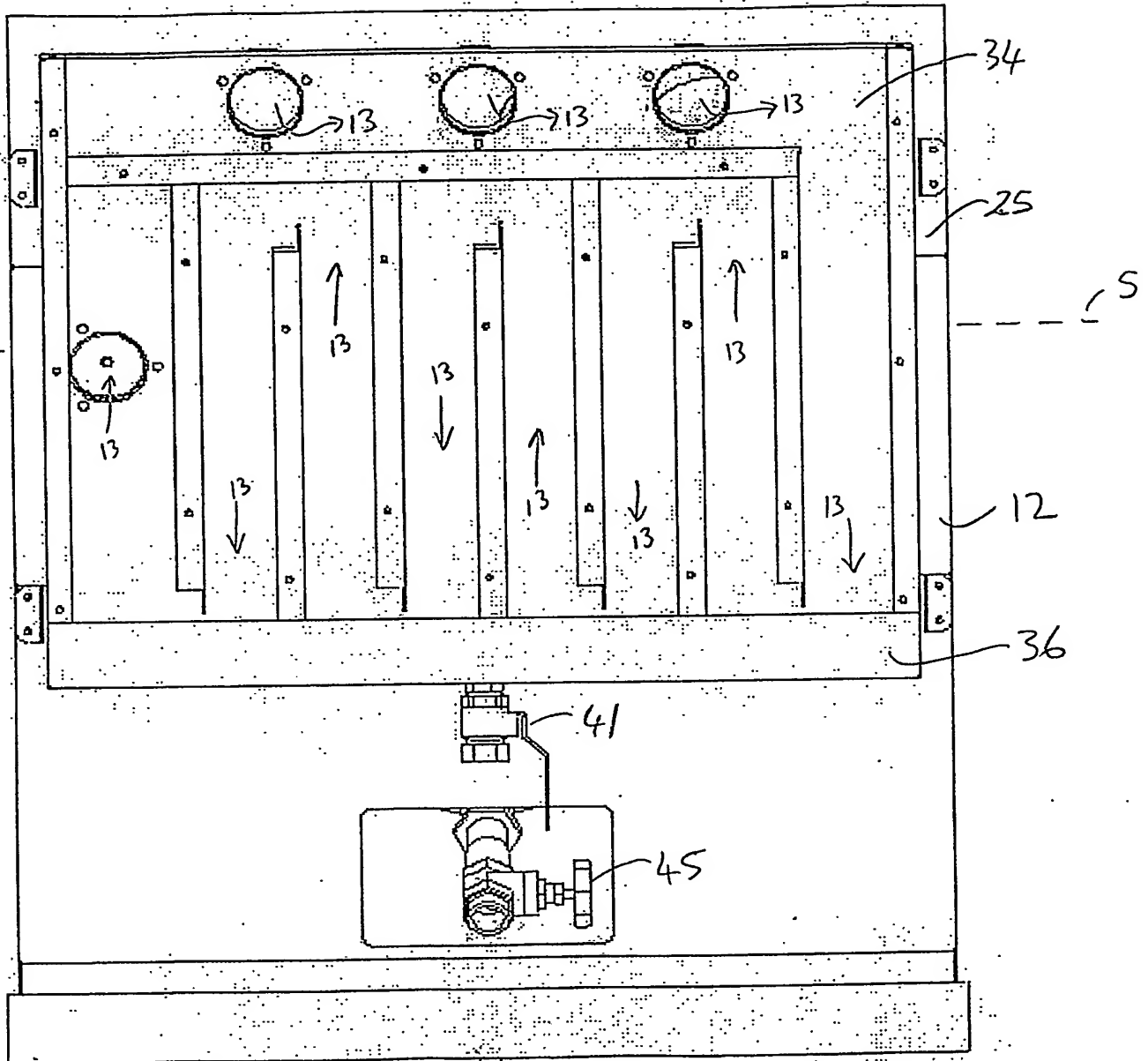
  
Applicant

Figure 2

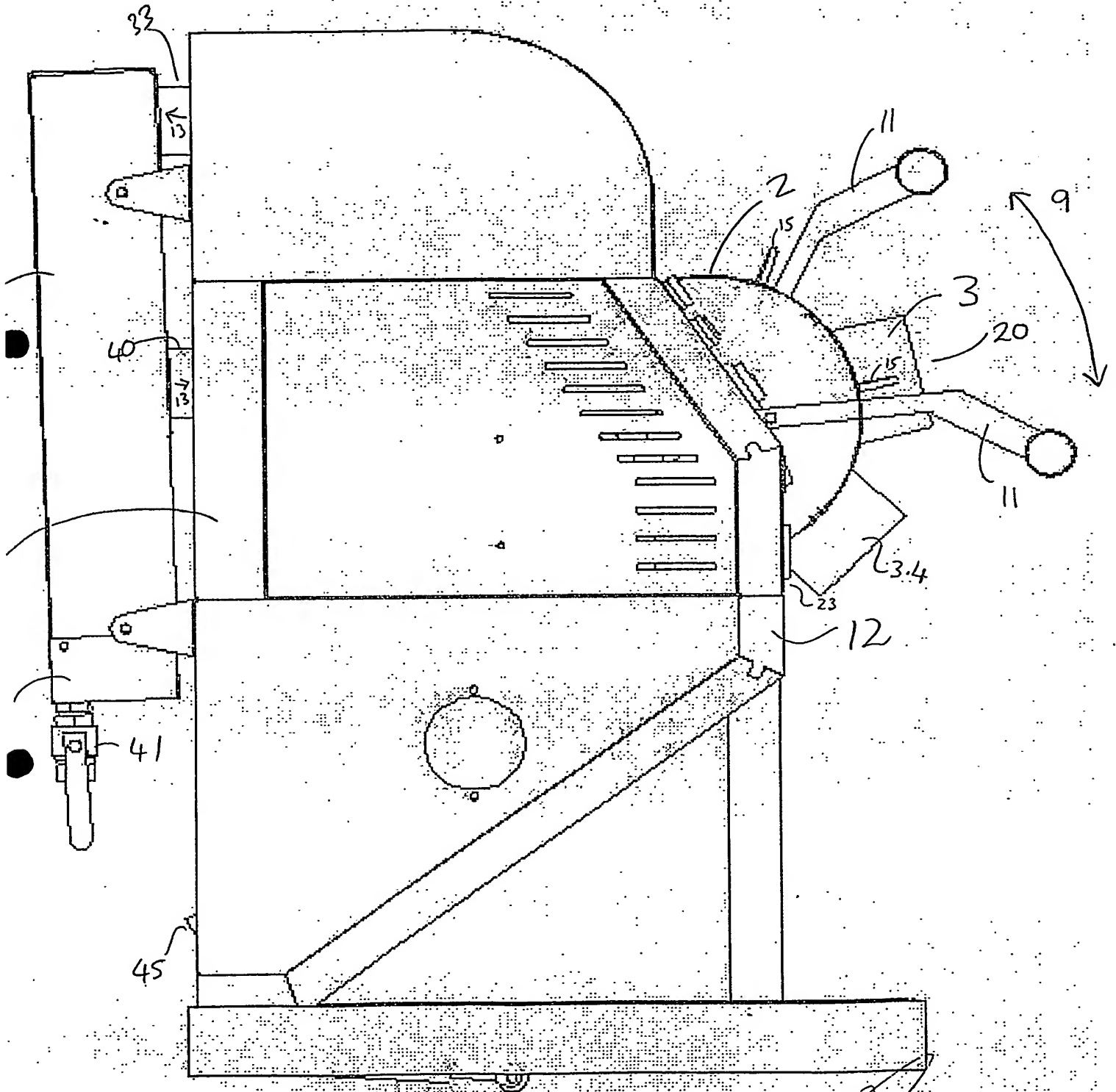
Cilliers De Kock



Applicant

Figure 3

Cilliers De Kock



Applicant

Figure 4

Cilliers De Kock

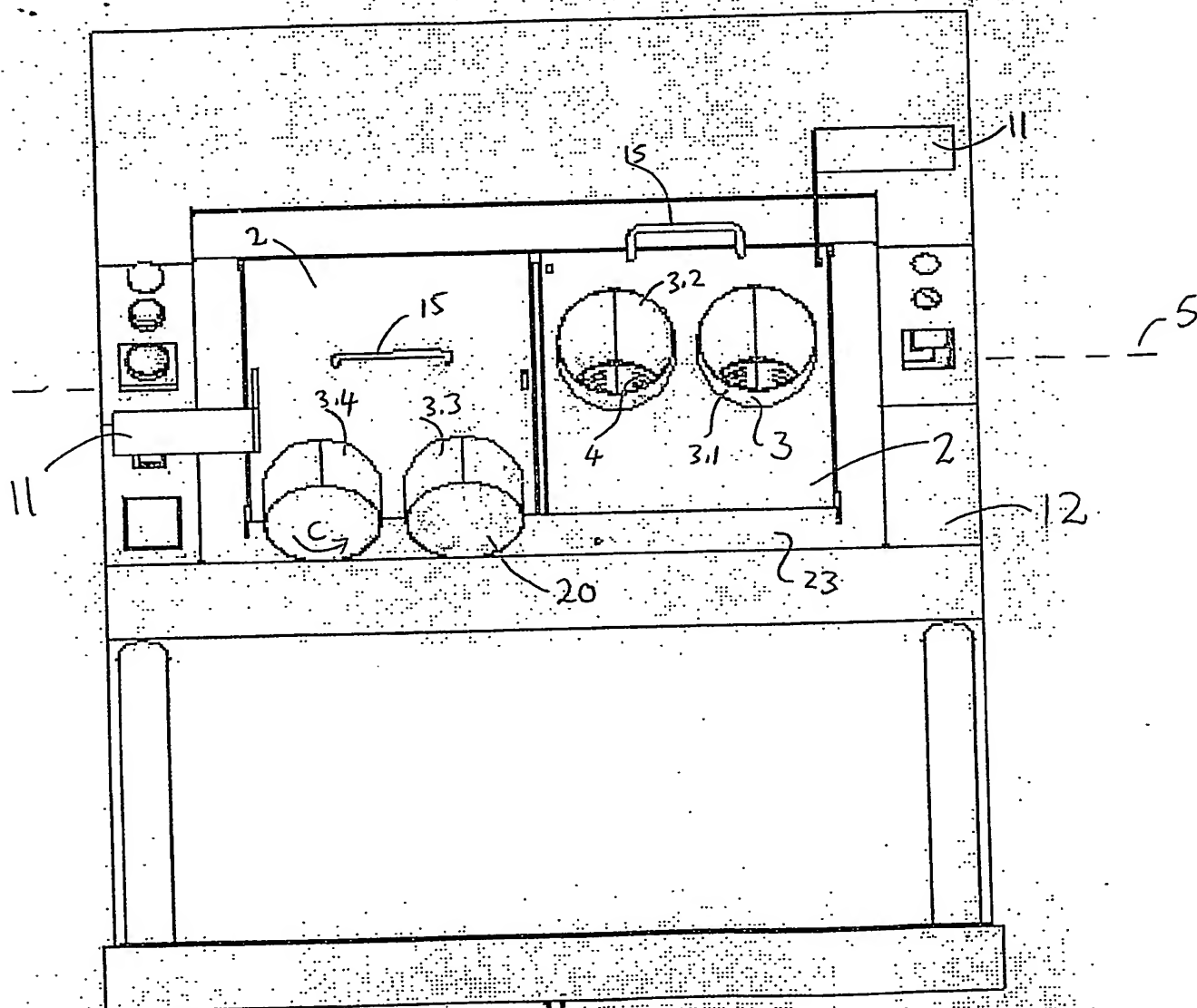

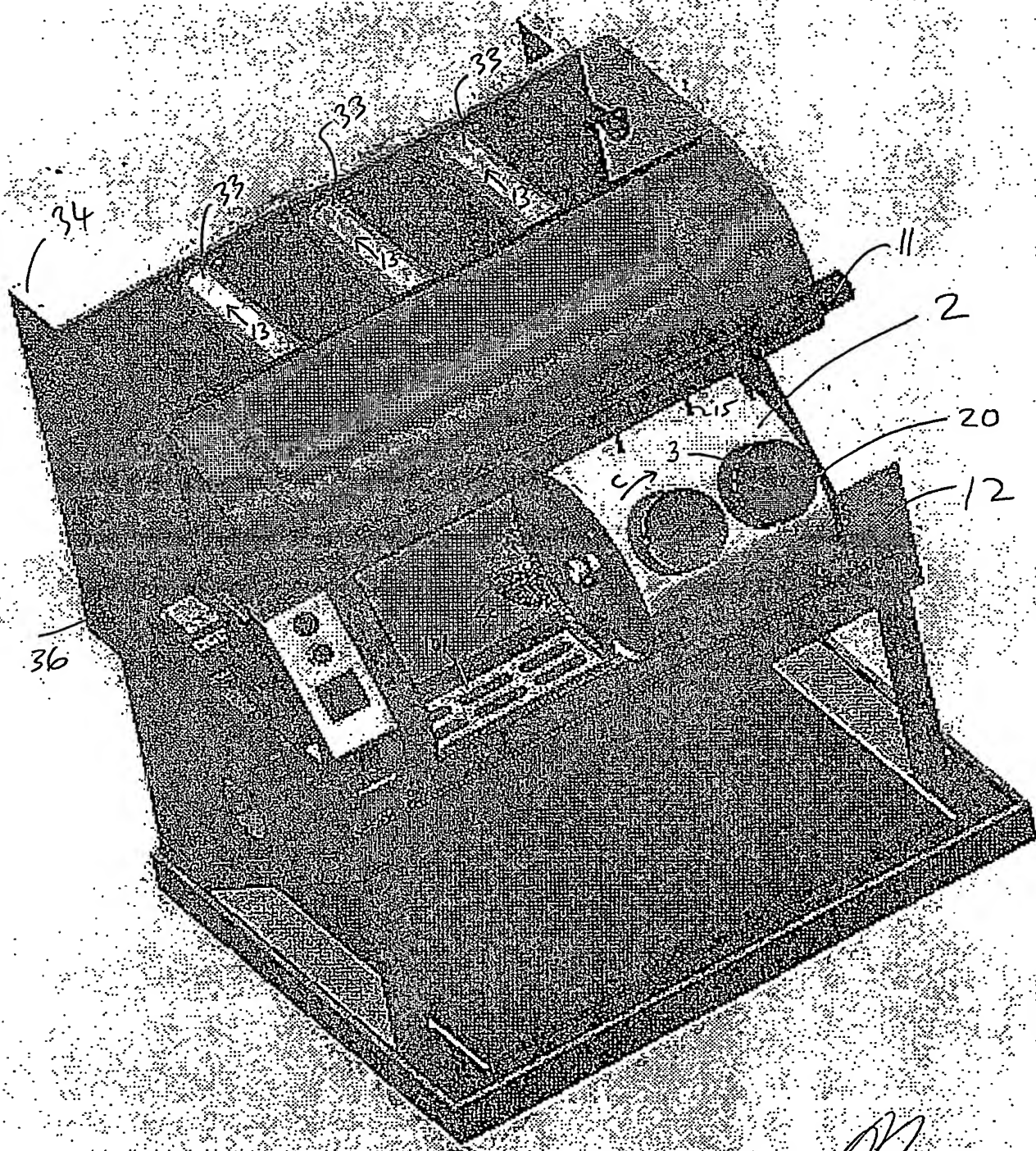


Figure 5

  
Applicant

Cilliers De Kock




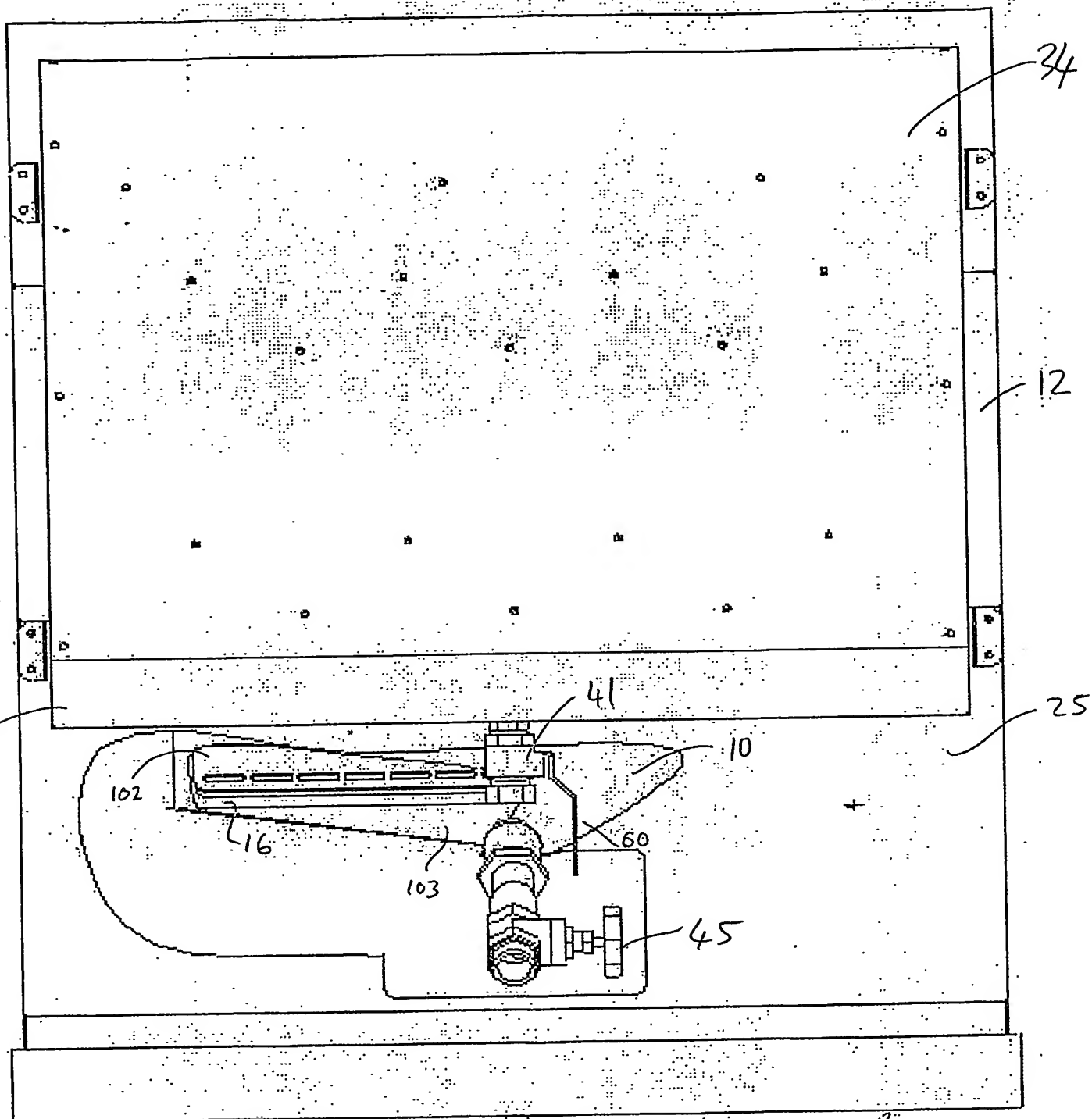
  
Applicant

Figure 6



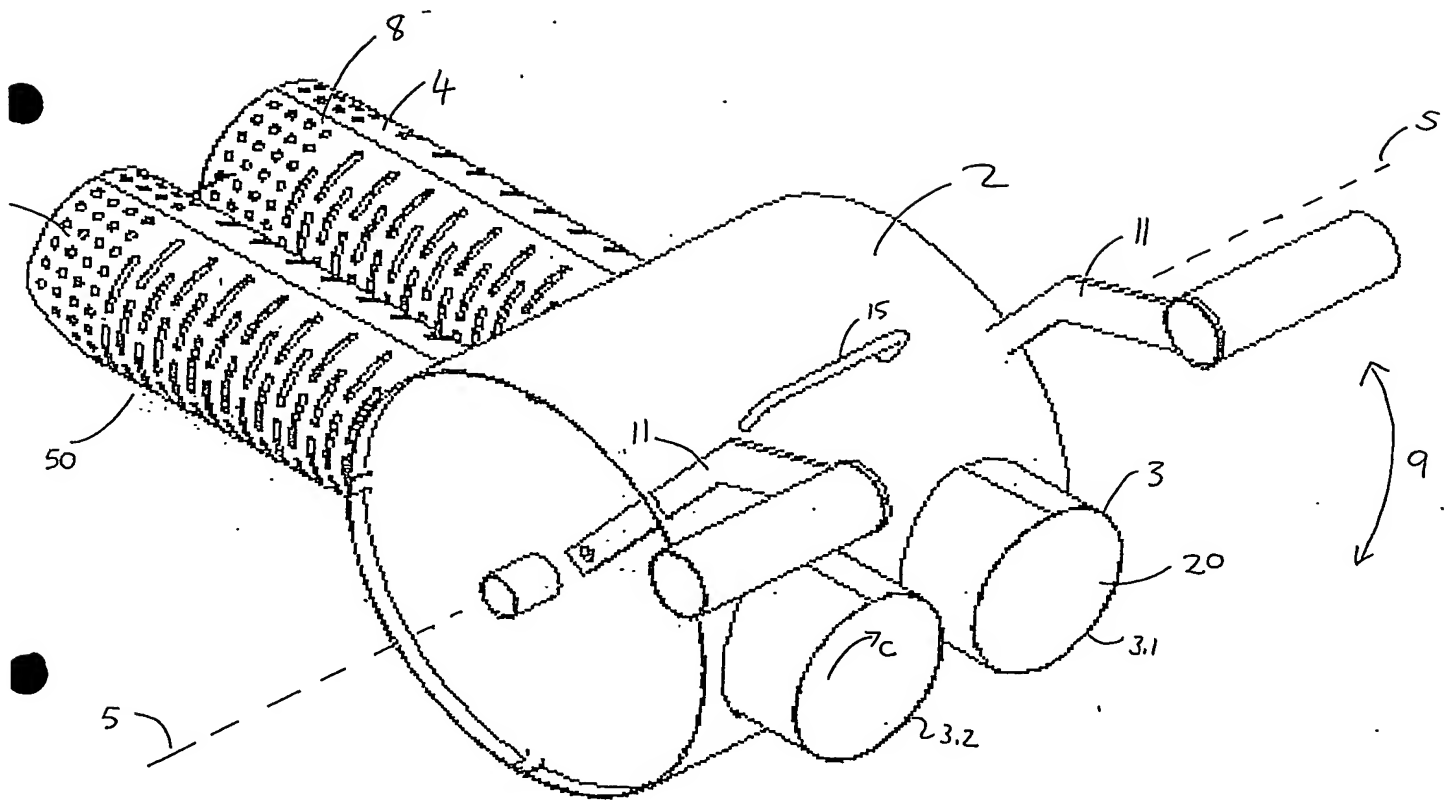
Cilliers De Kock



Applicant

Figure 7

Cilliers De Kock




  
Applicant

Figure 8

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☒ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☒ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**